Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Cancelled)
2. (Cancelled)
3. (Cancelled)
4. (Cancelled)
5. (Cancelled)
6. (Cancelled)
7. (Cancelled)
8. (Cancelled)
9. (Cancelled)
10. (Cancelled)
11. (Cancelled)
12. (Cancelled)
13. (Cancelled)
14. (Cancelled)
15. (Cancelled)
16. (Cancelled)
17. (Cancelled)
18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (Cancelled)

22. (Cancelled)

23. (Cancelled)

24. (Cancelled)

25. (Cancelled)

26. (Cancelled)

27. (Cancelled)

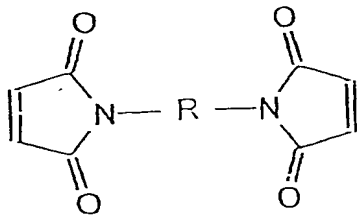
28. (Currently Amended) A method for corrosion-proofing a metal substrate, comprising:

applying a bond coating to the substrate, the bond coating consisting essentially of ~~comprising~~ at least one organic adhesion-conferring polymer, said organic adhesion-conferring polymer consisting ~~consists~~ essentially of at least one polybismaleimide selected from the group consisting of: (i) a homopolymer comprising a bismaleimide, (ii) a homopolymer comprising a maleimide-terminated oligomer, (iii) a homopolymer comprising a maleimide-terminated polymer, (iv) a copolymer comprising a bismaleimide, (v) a copolymer comprising a maleimide-terminated oligomer, and (vi) a copolymer comprising a maleimide-terminated polymer wherein the coating is applied from an aqueous solution, an organic solvent solution, a dispersion or an emulsion; and

subsequently stabilizing the bond coating on the substrate surface.

29. (Cancelled)

30. (Previously Amended) The method according to claim 55, wherein the bismaleimide has the formula:



wherein R is a residue selected from the group consisting of:

(A) a linear, substituted C_1-C_6 hydrocarbon;

(B) a linear, unsubstituted C_1-C_6 hydrocarbon;

(C) a cyclic, substituted C_3-C_6 hydrocarbon;

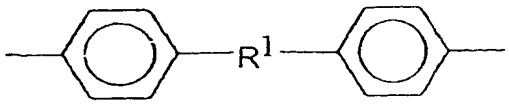
(D) a cyclic, unsubstituted C_3-C_6 hydrocarbon;

(E) a phenylene residue;

(F) a biphenyl residue;

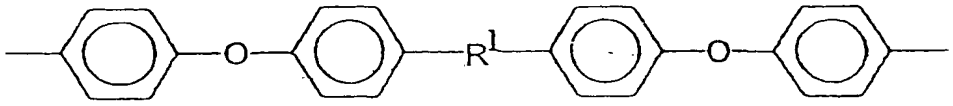
(G) a triazole;

(H) a compound with the formula:



wherein R^1 is selected from the group consisting of CH_2-, -O-, -C(=O)-, -$C(CF_3)_2$-, -S-, -S-S-, -SO- and -SO_2-; and

(I) a compound with the formula:



wherein R^1 is selected from the group consisting of CH_2-, -O-,

-C(=O)-, -$C(CF_3)_2$-, -S-, -S-S-, -SO- and -SO_2-.

31. (Cancelled)

32. (Cancelled)

33. (Cancelled)

34. (Previously Amended) The method according to claim 55, wherein the bond coating is applied in a thickness of from 10 to 5,000 nm.

35. (Previously Amended) The method according to claim 55, wherein the organic solvent solution, aqueous solution, dispersion, and emulsion have concentrations of from 5 to 30 weight percent.

36. (Previously Amended) The method according to claim 55, wherein before applying the bond coating, at least one auxiliary agent is added to the bond coating.

37. (Previously Presented) The method according to claim 36, wherein the at least one catalyst is selected from the group consisting of organic peroxides and ionic catalysts.

38. (Previously Amended) The method according to claim 55, wherein before applying the bond coating, at least one auxiliary agent is added to the bond coating.

39. (Previously Presented) The method according to claim 38, wherein the at least one auxiliary agent is selected from the group consisting of dispersants and emulsifiers.

40. (Previously Amended) The method according to claim 55, wherein the bond coating is stabilized by heat at a temperature from 50°C to 250°C.

41. (Previously Amended) The method according to claim 55, wherein the bond coating is stabilized by heat at a temperature from 80°C to 200°C.

42. (Previously Amended) The method according to claim 55, further comprising, before applying the bond coating, applying a thin organic film comprising at least one organic compound containing a polymerizable functional group, and stabilizing the thin organic film by heat.

43. (Previously Amended) The method according to claim 42, wherein the thin organic film is selected from the group consisting of an aqueous solution, organic solution, dispersion, and an emulsion.

44. (Previously Amended) The method according to claim 43, wherein the concentration of the solution is from 0.05 to 3 weight percent.

45. (Previously Amended) The method according to claim 42, wherein the organic film is stabilized by heat at temperatures from 20°C to 200°C.

46. (Previously Presented) The method according to claim 42, wherein the organic film is stabilized by heat at temperatures from 70°C to 140°C.

47. (Previously Presented) The method according to claim 42, further comprising applying a top coating to the substrate after step (c).

48. (Previously Amended) The method according to claim 55, wherein the substrate is selected from the group consisting of steel, aluminum, galvanized steel and magnesium.

49. (Previously Amended) The method according to claim 55, the substrate is selected from the group consisting of a vehicle body, an engine, a vehicle body component, an engine component, an assembly, and a coil.

50. (Previously Presented) The product produced by the method of claim 28.

51. (Currently Amended) A method for corrosion-proofing a metal substrate, comprising:

applying a bond coating to the substrate, the bond coating consisting essentially of ~~comprising~~ at least one organic adhesion-conferring polymer, wherein the at least one adhesion-conferring polymer comprises at least one polybismaleimide selected from the group consisting of: (i) a homopolymer comprising a bismaleimide, (ii) a homopolymer comprising a maleimide-terminated oligomer, (iii) a homopolymer comprising a maleimide-terminated polymer, and (iv) a copolymer comprising a maleimide-terminated polymer;

wherein the maleimide-terminated polymer is selected from the group consisting of:

(A) a phenol resin;

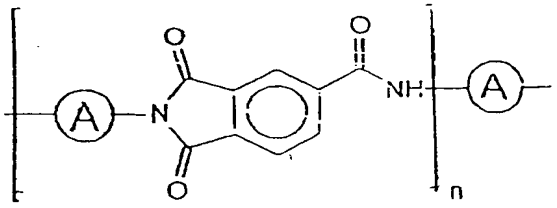
(B) a polyamide;

(C) a polyether ketone;

(D) a polyether sulfone;

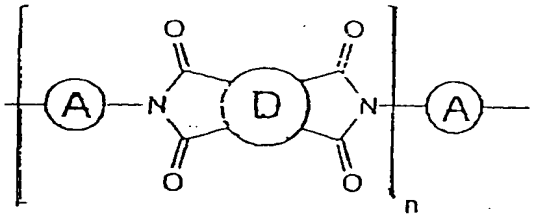
(E) a polyester;

(F) a polydiamide of a polyfunctional acid, with the formula:



wherein A stands for diamine; and

(G) a polydianhydride of a polyfunctional acid, with the formula:



wherein A stands for diamine and D for dianhydride; wherein the coating is applied from an aqueous solution, an organic solvent solution, a dispersion or an emulsion; and

subsequently stabilizing the bond coating on the substrate surface.

52. (Cancelled)

53. (Cancelled)

54. (Cancelled)

55. (Currently Amended) A method for corrosion-proofing a metal substrate, comprising:

(a) cleaning and de-greasing a substrate;

(b) applying a bond coating to the substrate, the bond coating consisting essentially of ~~comprising~~ at least one organic adhesion-conferring polymer consists essentially of at least one polybismaleimide selected from the group consisting of: (i) a homopolymer comprising a bismaleimide, (ii) a homopolymer comprising a maleimide-terminated oligomer, (iii) a homopolymer comprising a maleimide-terminated polymer, (iv) a copolymer comprising a bismaleimide, (v) a copolymer comprising a maleimide-terminated oligomer, and (vi) a copolymer comprising a maleimide-terminated polymer;

wherein the coating is applied from an aqueous solution, an organic solvent solution, a dispersion or an emulsion;

(c) stabilizing the bond coating on the substrate surface by heat or irradiation; and

(d) applying at least one paint coating on the substrate.

56. (Previously Amended) The method according to claim 55, wherein the maleimide-terminated polymer is selected from the group consisting of:

(A) a phenol resin;

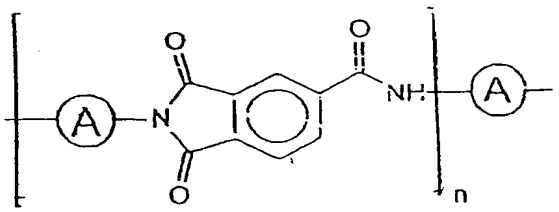
(B) a polyamide;

(C) a polyether ketone;

(D) a polyether sulfone;

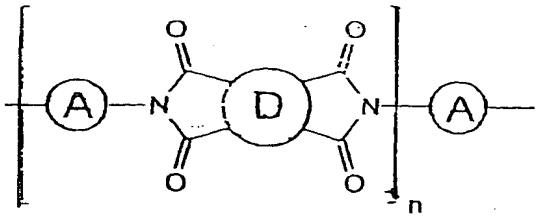
(E) a polyester;

(F) a polydiamide of a polyfunctional acid, particularly with the formula:



wherein A stands for diamine; and

(G) a polydianhydride of a polyfunctional acid, particularly with the formula:



wherein A stands for diamine and D for dianhydride.